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This is a list of publications reviewed by Nematology Investigations between November 15, 1960 and November 15, 1961. Most of the papers were indexed from the original journals or from reprints received through courtesy of the authors. A few more were indexed from abstracting journals. Still fewer were merely listed. In many cases the published abstract or a short note has been added to indicate the nature of the contents of the paper.

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Abrego, L. 1959. "Los nematodos seria amenaza para el cafe en El Salvador." Cafe de El Salvador 29(336/337):663-667.

Abrego, L. and Holdeman, Q. L. 1961. "Nematodos del Cafe en El Salvador (Informe de Progresos)." Inst. Salvadoreno de Invest. Cafe, Boletin Info. Suplemento No. 8, Santa Tecla. No. 8 - 16pp.

Aguirre, A. 1959. "El nematodo dorado de la patata." ASPAS 34:16-18.

Alcocer Gomez, L. 1960. "Nematodos parasitos de plantas." Fitofilo. 13(25):7-24. Includes control.

Allen, M. W. and A. R. Maggenti. 1959. "Plant Nematology in California." California Agriculture. 13(9):2-3. Re: historical: "State's crop losses led to first department for research in plant nematology to be established by experiment stations."

Allen, M. W. 1960. "Alimentary canal, excretory and nervous systems." Nematology (Ed. by J. N. Sasser and W. R. Jenkins) Chapel Hill, North Carolina, 480 pp. Chap. 11:136-139.

\_\_\_\_\_. 1960. "The genera *Pratylenchus*, *Radopholus*, *Pratylenchoides*, *Rotylenchulus*, and *Nacobbus*; *Tylenchulus*, *Trophotylenchulus*, *Trophonema*, and *Sphaeronema*." Nematology (Ed. by J. N. Sasser and W. R. Jenkins) Chapel Hill, North Carolina, 480 pp. Chap. 14:181-184.

\_\_\_\_\_. 1960. "The superfamily Aphelenchoidea." Nematology (Ed. by J. N. Sasser and W. R. Jenkins) Chapel Hill, North Carolina, 480 pp. Chap. 21:220-221.

\_\_\_\_\_. 1960. "The genera *Xiphinema*, *Longidorus* and *Trichodorus*." Nematology (Ed. by J. N. Sasser and W. R. Jenkins) Chapel Hill, North Carolina, 480 pp. Chap. 24:227-228.

\_\_\_\_\_. 1960. "Systematic concepts." Nematology (Ed. by J. N. Sasser and W. R. Jenkins) Chapel Hill, North Carolina, 480 pp. Chap. 25:229-230.

Allgen, C. A. 1957. "Vergleich zwischen den marinen Nematodenfaunen Norwegens und der Tropen I." Kongelige Norske Videnskabers Selskabs Forhandlinger, Year 1956. 29(9):36-40.

\_\_\_\_\_. 1957. "Vergleich zwischen den marinen Nematodenfaunen Norwegens und der Tropen II." Kongelige Norske Videnskabers Selskabs Forhandlinger, Year 1956. 29(10):41-46.

\_\_\_\_\_. 1958. "Zwei weitere Fälle von Bisexualität bei schwedischen freilebenden marinen Nematoden." Zoologischer Anzeiger. 161(11/12):317-319.

Altherr, E. 1960. "Rhabditis guenini n. sp." Bulletin de la Societe Vaudoise des Sciences Naturelles. 67(5):211-214.





Altman, Jack and B. J. Fitzgerald. 1960. "Late Fall application of fumigants for the control of sugar beet nematode, certain soil fungi, and weeds." *Plant Disease Reporter*. 44(11):868-871.

Altman, Jack. 1960. "For controlling sugar beet nematode .... Late-Fall fumigation shows promise." *Colorado Farm and Home Research*. 11(3):3-4.

Ancalmo, Oscar. 1961. "Nematode on *Tabebuia pentaphylla* in El Salvador." *Plant Disease Reporter*. 45(10):826.

Andersen, A. M. and Leach, C. M. 1961. "Testing seeds for seedborne organisms." *Seeds, the Yearbook of Agriculture, U.S.D.A., Washington, D.C.* 453-457. Re: Brief summary of identification of nemic diseases externally borne and of gall formation.

Andersen, S. 1960. "Oat nematode problems." *Tolvmandsbladet*. 32(11):497-501. (In Danish)

Andrassy, I. 1959. "Neubenennungen Einiger Homonymen Nematoden-Gattungen." *Nematologica*. 4(3):223-226.

\_\_\_\_\_. 1959. "Nematoden aus dem Psammon des Adige-Flusses, I." *Estratto - dalle Memorie del Museo Civico di Storia Naturale - Verona*. VII:163-181.

\_\_\_\_\_. 1960. "Beiträge zur Kenntnis der freilebenden Nematoden Chinas. I. Die von V. Szekessy gesammelten Nematoden." *Annales Historico - Naturales Musei Nationalis Hungarici (Pars Zoologica)*. 52:201-216.

\_\_\_\_\_. 1960. "Nematologische Notizen, 8." *Opuscula Zoologica - Instituti Zoosystematici Univ. Budapestinensis*. III(3-4):111-116.

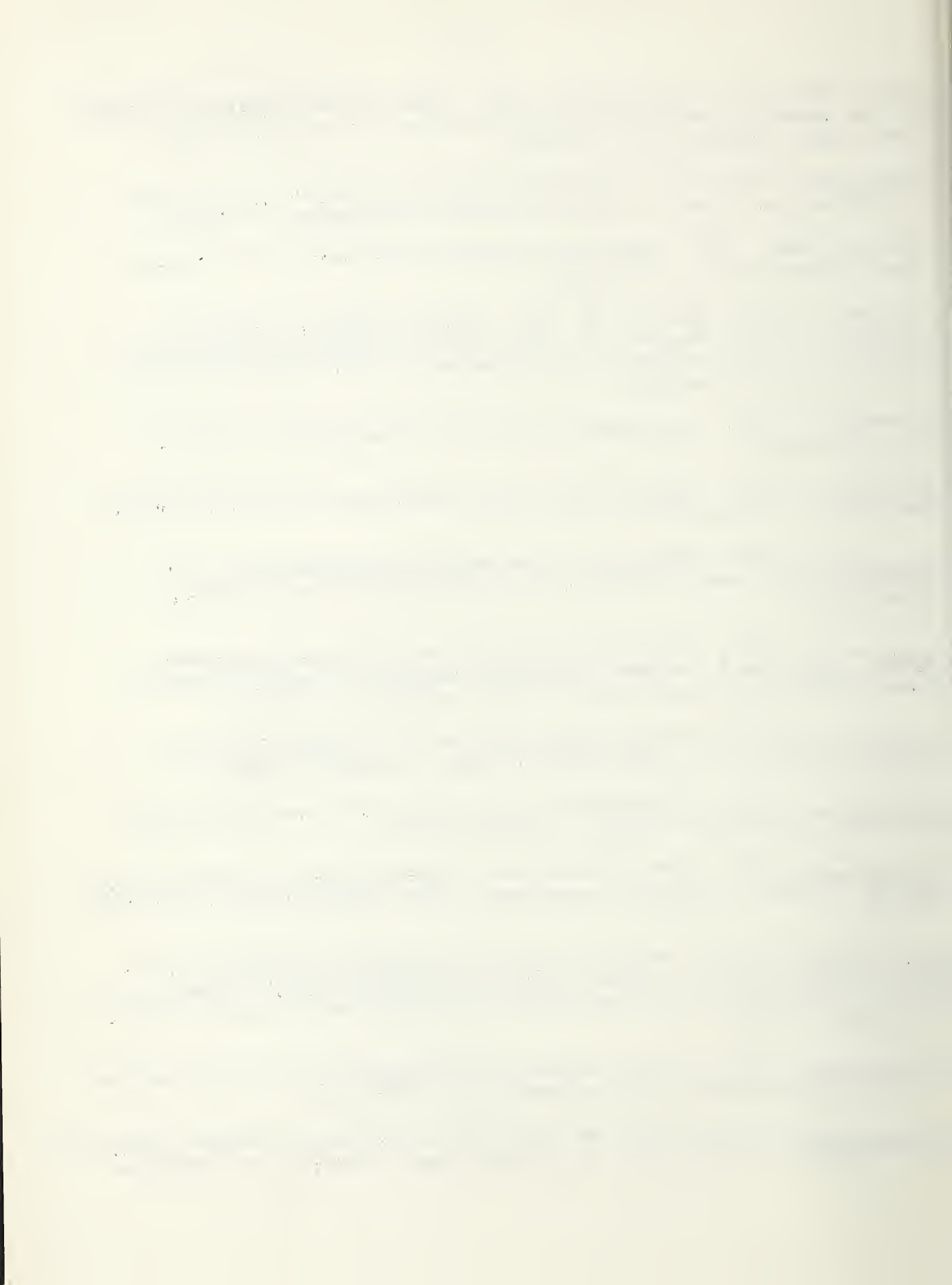
\_\_\_\_\_. 1960. "*Panagrobelus topayi* n. sp., eine neue Nematoden-Art aus Kenya." *Zoologischer Anzeiger*. 164(5/6):195-198.

\_\_\_\_\_. 1960. "Zwei bemerkenswerte Nematoden-Arten aus Belgisch-Kongo." *Opuscula Zoologica - Instituti Zoosystematici Univ. Budapestinensis*. III(3-4): 101-110.

\_\_\_\_\_. 1960. "Nematoden aus dem Periphyton der Landungsmolen der Donau Zwischen Budapest und Mohacs. (Danubialia Hungarica, III)." *Annales Universitatis Scientiarum Budapestinensis de Rolando Eötvös nominatae (Sectio biologica)*. 3:3-21.

\_\_\_\_\_. 1960. "Einige Nematoden aus Afghanistan." *Opuscula Zoologica - Instituti Zoosystematici Univ. Budapestinensis*. IV(1):3-14.

\_\_\_\_\_. 1961. "Neue und Seltene Arten der Familie Alaimidae (Nematoda)." *Acta Zoologica*. VII(1-2):1-18. Re: Including keys to *Alaimus* and *Amphidelus*.





Andrassy, I. 1961. "Zur Taxonomie der Neotylenchiden." Nematologica. 6(1):25-36.

\_\_\_\_\_. 1961. "Eine neue Art der seltenen Nematoden-Gattung Triplonchium Cobb, 1920." Nematologica. 6(1):37-41.

Anon. 1959. "Le nematode des racines de la pomme de terre." Leaflet published by Stat. federal. d'essais agricoles Lausanne, Switzerland. 4pp.

\_\_\_\_\_. 1959. "Import interceptions of interest." Canadian Insect Pest Review. 37(7):251.

\_\_\_\_\_. 1959. "Potato - a root-knot nematode (Meloidogyne arenaria)." Canadian Insect Pest Review. 37(7):242.

\_\_\_\_\_. 1959. "Vorschlag zur Aufstellung eines einheitlichen Testsortimentes zur Identifizierung von Biotypen des Kartoffelnematoden und zu deren Bezeichnung." (A proposal for a uniform test series for the identification and designation of biotypes of potato root eelworm) Deut. Akad. Landwirt-wissenschaft. zu Berlin, Tagungsberichte Nr. (20):183-185.

\_\_\_\_\_. 1959. "New plant diseases." Agricultural Gazette of New South Wales. 70(12):648-650. Re: Meloidogyne spp. attacks reported on several hosts for first time.

\_\_\_\_\_. 1960. "New plant diseases." Agricultural Gazette of New South Wales. 71(3):156-157.

\_\_\_\_\_. 1960. "The golden nematode (Heterodera rostochiensis) of potatoes and tomatoes; how to prevent its spread." U.S.D.A. Leaflet #361 - slightly revised. 4p.(color plate).

\_\_\_\_\_. 1960. "Hackfruchtkrankheiten und Nematodenforschung. Festschrift anlässlich der Einweihung des Neubaus für das Institut für Hackfruchtkrankheiten und Nematodenforschung der Biologischen Bundesanstalt für Land- und Forstwirtschaft in Münster (Westf.)." Berlin. Biol. Bundesanst. f. Land- u. Forstwirt. 99,119p. Includes vegetables and grapes.

\_\_\_\_\_. 1960. "National Nematode Conference. (Proceedings) 1st, March 14-15, 1960." Wash. Amer. Assoc. Nurserymen. 155 p. (Mimeo.) Includes various authors, plus discussions of attendants.

\_\_\_\_\_. 1960. "Eelworms on strawberries." Gt. Brit. Min. Agr. Fisheries and Food. Adv. L. 414, rev., 8 p.

\_\_\_\_\_. 1960. "Beet eelworm (Heterodera schachtii)." Gt. Brit. Min. Agr. Fisheries and Food. Adv. L. 233, rev., 6 p. On sugar beets.

\_\_\_\_\_. 1960. "Het tulpestengelaaltje (Ditylenchus dipsaci Kühn Filipjev). Wageningen." Netherlands. Plantenziektenk. Dienst. Vlugchr. 77, 6 p.-folder.



Anon. 1960. "Potato root eelworm (*Heterodera rostochiensis* Woll.)." European and Mediterranean Plant Protection Organization. Paris, 1960. 10 p.

\_\_\_\_\_. 1960. "Distribution of plant-parasitic nematodes in the south." South. Coop. Ser. B. 74. 72p., maps. (Agr. Exp. Stations of Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, Oklahoma, Puerto Rico, South Carolina, Tennessee, Texas, Virginia and the U.S.D.A., cooperating.)

\_\_\_\_\_. 1960. "Recomendaciones preliminares sobre medios de lucha contra los nematodos en el cafeto." Cafe de El Salvador. 30(344/345):417-420. Re: nematodes of coffee - not named, but illustrations show no knots and infected plants are similar to those of "mastic" (*Pastacia*).

\_\_\_\_\_. 1961. "Het tulpestengelaaltje (*Ditylenchus dipsaci* Kühn Filipjev)." (The tulip stem nematode *Ditylenchus dipsaci* (Kühn) Filipjev). Netherland. Plantenziektenk. Dienst. Vlagschr. 77, i.e. 78, 5 p.-folder.

\_\_\_\_\_. 1961. "DON'T rotate--fumigate!" West. Crops and Farm Mangt. 10(5):31-33. For nematode control in field crops.

\_\_\_\_\_. 1961. "Research in vegetables. Including tomatoes, lettuce and celery." Fruit World and Market Grower. 62(1):43-45. Leaf mold, *Verticillium*, *Fusarium* and nematodes are a serious problem in the growing of glasshouse tomatoes in Australia. Varieties are being tested for resistance. Lettuce spotted wilt (caused by the tomato spotted wilt virus) has been controlled to some extent by using *Metasystox* and Rogor 40 sprays against the insects which spread it. Borax sprays (4 oz./2.5 gal.) were effective in treating B deficiency of celery.

\_\_\_\_\_. 1961. "Development of research in plant nematology." Agric. Chemicals. 16(2):41&96. General article. (based on address by V. G. Perry.)

Anon. 1961. "Rootstocks to aid against decline." Agricultural Research - USDA. 9(7):15.

\_\_\_\_\_. 1961. "Root knot doesn't affect NC 95." Agric. Research. 9(8):15. Re: Tobacco variety resistant to the most widely distributed root knot in tobacco areas of South.

\_\_\_\_\_. 1961. "Sugar kills nematodes." Agricultural Research. 9(9):3-4. (work of Feder, W. A. and associates).

\_\_\_\_\_. 1961. "Agrisearch Notes: Agrisea. Two soybeans will be released." Agricultural Research. 9(9):15. Bethel is resistant to *Meloidogyne incognita* acrita.

\_\_\_\_\_. 1961. "Nemaguard rootstock is available." Agricultural Research. 10(2):15. (Tested at Beltsville, Maryland, Fort Valley, Georgia and Fresno, California, and found resistant to rootknot.





Anon. 1961. "What we're doing to improve carrots." Agricultural Research. 10(3):12.

\_\_\_\_\_. 1961. "Controlling sting and northern rootknot nematodes of peanuts." Va. Polytech. Inst. Agr. Ext. C. 879, 6 p. folder. Presumably re: *Meloidogyne* hapla and *Belonolaimus* spp., but no scientific names given. Control by fumigation with DD, EDB, DBCP and D.

Apt, Walter J. and Charles J. Gould. 1961. "Control of root-lesion nematode, *Pratylenchus penetrans*, on narcissus." Plant Disease Reporter.

Aycock, R. and Sasser, J. N. 1961. "Performance of certain nematocides and nematocide-fertilizer mixtures applied to vegetable crops in North Carolina." Plant Dis. Reporter. 45(8):620-624.

Baines, R. C., S. D. Van Gundy, and S. A. Sher. 1959. "Citrus and Avocado nematodes." California Agriculture. 13(9):16-18.

Baines, R. C., and others. 1960. "Controlling citrus nematodes in established orchards." Calif. Citrog. 45(12):389,400,402,404-406. L. H. Stolzy, R. H. Small, S. B. Boswell, and G. E. Goodal, joint authors. Re: Citrus orchards.

Baker, A. D. 1960. "Some records of nematodes encountered in Canada on native and imported plant material in 1959." Canadian Insect Pest Review. 37(9):295-297.

Baranovskaja, I. A. 1959. "Eine methode zur kausalen Analyse der Nematoden-fauna bei Getreidekulturen." (A method of causal analysis of the nematode Fauna in cereals.) Helminthologia. 1(1-4):13-20. (In Russian - brief English summary no species given for hosts and hosts not entered.)

Bazan de Segura, C. 1960. "Notes on cotton diseases in Peru." FAO Plant Protection Bulletin. 8(11):132-134.

Belyaeva, A. S., and Kalmykova, A. M. 1960. "Control of gall nematode." (In Russian) Zashch. Rast. of Vred. i Boleznei. (12):25-26. Greenhouse culture.

Bergeson, G. B. 1959(1960). "Preliminary studies on the migration of the root-knot nematode, *Meloidogyne incognita acrita*." Proc. Indiana Acad. Sci. 69:106.

Bergman, B. H. H. 1960, publ. 1961. "Het bietencystenaaltje en zijn bestrijding. VIII. Het voorkomen van cysten van *Heterodera schachtii* op het oppervlak van suikerbieten in het najaar van 1959." (VIII. The presence of cysts of *Heterodera schachtii* on the surface of sugarbeets in 1959) Meded. Inst. v. Rationele Suikerproductie. 30(6):195-204. English summary.

Bhaduri, N. V. and A. K. Bandyopadhyay. 1959. "Parasitological survey: incidence of intestinal helminthic infection in a jail population in India." Bull. Calcutta Sch. Trop. Med. 7(3):107-108. Stools collected from 197 normal adult males, 6-60 years of age were studied and eggs of hookworm or *Ascaris*





counted. The helminthic infection rate was 65.4%, hookworm 83.9% and Ascaris 10.6%. The average number of hookworm eggs found was 784.5/cc of stool, the minimum being 100 and the maximum 3400. The average number of Ascaris eggs/cc of stool was 2492.8, the minimum being 300 and the maximum 16,200. The number of infections found was hookworm 110; Ascaris 14; Trichuris 24; Enterobius 2; Trichostrongylus 5; Hymenolepis nana 7, and Heterodera 3.

Bijloo, J. D. 1960. "Het Effect van Wassen en Ontsmetten van Aardappelen." In Dutch - English summary, p.49. Nat. Raad v. Landbouwkundig Onderzoek T.N.O.; Werkgroep Onderz. Bestrij. Aardappelcystenaaltje; 1950-1960 Resultaten. 42-45. Re: successful machine for washing potatoes, disinfection of potato and gladiolus by mercurials - H. rostochiensis control.

Bijloo, J. D., Kaars Sijpesteijn, A., and den Ouden, H. 1960. "Onderzoek over de chemische Bestrijding van het Aardappelcystenaaltje." In Dutch - English summary, p.49. Nat. Raad v. Landbouwkundig Onderzoek T. N. O.; Werkgroep Onderz. Bestrij. Aardappelcystenaaltje; 1950-1960 Resultaten. 34-37. Re: search for nematocides against H. rostochiensis, other than the too-expensive DD.

Bindra, O. S. and Kittur, S. U. 1957. "A note on the nematode Mermis indica v. Linstow parasitising insects." Journal of the Bombay Natural History Society. 54(3):796.

Bingefors, Sven. 1960. "Stem nematode in lucerne in Sweden. I. A survey of the distribution of stem nematode in lucerne-growing areas." Kungl. Lantbrukshögskolans Ann. 26. 317-322. Illus. Map. Stem nematode attacks in lucerne have previously been very uncommon in Sweden. However, a field survey during 1958 and 1959 showed that such attacks are common now, especially in southern Sweden. There is reason to believe that the nematodes are introduced by imported seed. Cooperative use of harvesting machinery may spread the nematodes from farm to farm. As a rule intervals between lucerne crops have been long, suggesting that the nematode has not been soil-borne. Damage of economic importance has been caused sometimes in the 2d-year ley and very often in the 3d-year ley.

\_\_\_\_\_. 1961. "On resistance to stem nematode in alfalfa." With International Nematology Symposium Abstracts of the Papers. Eng. p.84.

\_\_\_\_\_. 1961. "Stem nematode Ditylenchus dipsaci in clovers and lucerne and their control by breeding for resistance." Internatl. Grassland Cong. Proc. 8:78-81.

Birchfield, W. 1960. "A new species of Catenaria parasitic on nematodes of sugarcane." Mycopathologia et Mycologia applicata. 13(4):331-338.

\_\_\_\_\_. 1960. "Growth studies of a Catenaria sp. infecting nematodes." Phytopathology. 50(9):629.

\_\_\_\_\_. 1961. "The invisible enemy." Sugar Journal. 23(12):30-32, 36.



Birchfield, W. and Jones, J. E. 1961. "Distribution of the reniform nematode in relation to crop failure of cotton in Louisiana." *Plant Disease Reporter*. 45(9):671-673.

Bird, Alan F. 1960. "Additional notes on the attractiveness of roots to plant-parasitic nematodes." *Nematologica*. 5(3):217.

Bird, A. F. and Brownell, P. F. 1961. "Growth of a nematode in tomato plants grown on sodium-deficient water cultures." *Nature*. 189(4762):418-419.

Blake, C. D. and Walker, J. 1959. "Pineapple wilt." *Agricultural Gazette of New South Wales*. 70(12):638-641. In some parts of the world nematodes, unnamed, have been recognized as an important factor in causing pineapple wilt. In New South Wales no assessment of their possible role has been made but it is considered possible that they may be of importance.

Blake, C. D. 1961. "Root rot of bananas caused by *Radopholus similis* (Cobb, 1893) Thorne, 1949 and its control in New South Wales." *Vith International Nematology Symposium Abstracts of the Papers*. Eng. p.64.

Boell, E. J. 1960. "The Cartesian Diver Technique in Microrespirometry and Enzyme Assay." *Nematology* (Ed. by J. N. Sasser and W. R. Jenkins) Chapel Hill, N. C., 480 pp. Chap. 8:109-121.

Bogucka, H. 1960. "beobachtungen über das Vorkommen der Nematoden von der Art *Meloidogyne hapla* Chith. auf verschiedenen Kultur--besonders Arzneipflanzen und Unkräutern." In Polish. *Poznan. Panst. Inst. Nauk. Leczniczych Surowcow Roslinnych*. B. 6(1):54-64. German summary. Re: Information on 10 medicinal plants or weeds in Poland, - *Meloidogyne hapla*.

Bonifacio, Annarosa, and Anna Marinari. 1959. "Un caso di associazione fra *Fusarium roseum* e nematodi su talee di garofano in deperimento." (A case of association between *F. roseum* and nematodes on decaying carnation cuttings.) *Redia* 44:229-238. In a case of decay in carnation cuttings in the Sanremo district, *F. roseum* and nematodes of the spp. *Aphelenchoides saprophilus*, *Rhabditis pelliodes*, and *Cephalobus nannus* were isolated from the altered tissues and particularly from those near the cicatrization callus. Three series of laboratory experiments were made to find out the biological relations among these organisms and the degree of their pathogenicity to the plants. *Fusarium* inoculations on carnation rooted cuttings in heat-sterilized sand proved the fungus to be pathogenic independently of the influence of the other organisms. Inoculations with the 3 spp. of nematodes mentioned were made on carnation rooted cuttings in sterilized sand and on carnation seedlings grown in test-tubes containing burnt and autoclaved sand. In order to prevent contamination by bacteria and fungi, the nematodes were washed in a solution of streptomycin (0.02%) and of potassium bisulfite (0.1%). The results showed that no pathogenic action on the plants can be imputed to the 3 spp. of nematodes mentioned. In the 3d series of experiments, the inoculations of nematodes were made into sterilized water containing mycelium and conidia of *Fusarium roseum* and in carnation broth with an addition of strepto-





mycin. The multiplication of the specimens of *R. pellioides* and *A. saprophilus* was remarkable, but this did not occur with *C. nanus*. Therefore it appears that these nematodes can live and multiply on *F. roseum*, not on vegetable tissues or vegetable broth.

Boock, O. J. and Lordello, L. G. E. 1961. "Controle de Nematodeos em Culturas de Batata doce." *Revista de Agricultura*. 36(2):85-91. Re: Control of *Meloidogyne incognita* with Nemagon and Vapam on sweetpotatoes - also Aldrin for mites.

Boock, O. J. 1959. "Influencia da adubacao e da fumigacao do solo, na incidencia de nematoides em tuberculos de batatinha." (Influence of fertilizers and soil fumigation on the nematode incidence of potato tubers.) *Bragantia*. 18(22):327-335. The most important losses caused by root nematodes to the potato crop in the State of Sao Paulo and other parts of Brazil are due to the species *Meloidogyne incognita* and *Pratylenchus steineri*. The former is quite widespread and measures aiming at its control were studied under field conditions. Results are reported on the influence of fertilizer and soil fumigation with ethylene dibromide at 10%, either separately or combined, on nematode infestation of potato yield. The fertilizer application had no influence on nematode infestation of potato tubers. Fumigation with ethylene dibromide, when applied in holes 20 x 20 cm apart 8 or more days before planting, reduced the nematode infestation of the crop. In addition, there was a satisfactory increase in yield especially when the fumigant was applied twice a year to the same plots, once for the dry season planting (March to August) and another for the rainy season crop (September to February.)

Borozdina, K. I. 1960. "Effectiveness of preparation 23 and D-D in the control of potato nematode *Heterodera rostochiensis* W." (In Russian) *Vsesoyuzn. Nauch. -Issled. Inst. Zashch.* 14:79-92.

Bouriquet, G. 1959. "Plant diseases and pests in some African territories." *FAO Plant Protection Bulletin*. 7(5):61-63. Bouriquet summarizes the incidence of plant diseases and pests during 1958 in some African territories. In doing so he mentions that in Togo it was at first thought that Kaincope disease of the coconut palm might be due to nematode attack but further studies did not confirm this.

Van den Brande, J., D'Herde, J. and Gillard, A. 1960. "Sur les proprietes nematicides de la cyanamide de chaux." Gand, Vyncke. 20p. English summary.

von Brand, T. 1960. "Influence of size, motility, starvation, and age on metabolic rate." *Nematology* (Ed. by J. N. Sasser and W. R. Jenkins) Chapel Hill, North Carolina, 480 pp. (Chap.26):233-241.

\_\_\_\_\_. 1960. "Influence of oxygen on life processes." *Nematology* (Ed. by J. N. Sasser and W. R. Jenkins) Chapel Hill, North Carolina, 480 pp. (Chap.27):242-248.





von Brand, T. 1960. "Influence of pH, ions, and osmotic pressure on life processes." Nematology (J. N. Sasser and W. R. Jenkins, Editors) Chapel Hill, North Carolina, 480 pp. (Chap. 28):249-256.

\_\_\_\_\_. 1960. "Influence of temperature on life processes." Nematology Ed. by J. N. Sasser and W. R. Jenkins Chapel Hill, North Carolina, 480 pp. (Chap. 29):257-266.

Breniere, J. 1959. "Les insectes nuisibles au tabac a Madagascar." Bulletin. Institut de Recherches Agronomiques de Madagascar. (3):102-146. Symptoms of *Meloidogyne javanica* on tobacco and its control. D-D, EDB and methyl bromide mentioned.

Briand, L. J. 1959 (1960). "The nematode *Howardula benigna* Cobb, 1921, parasite of the cucumber beetles in Ontario." Proc. Ent. Soc. Ontario 90:53. The entomophagous nematode *Howardula benigna* Cobb was found in the striped cucumber beetle *Acalymma* (= *Diabrotica*) *vittata* (Fab.) in eastern Ontario in 1958 and 1959. It was not observed in the other species *Acalymma* (= *Diabrotica*) *trivitta* (Mann.) also common in this region.

Brodie, Bill B., L. A. Brinkerhoff and F. Ben Struble. 1960. "Resistance to the root-knot nematode, *Meloidogyne incognita* acrita, in Upland cotton seedlings." Phytopathology. 50(9):673-677.

Brown, E. B. 1960. "Recent work on eelworm attack on flower crops." Expt. Hort. 3:71-72. London. *Aphelenchoides ritzema-bosi*, attacking chrysanthemum and other ornamentals. *Ditylenchus dipsaci* on aster and sweet sultan; *Meloidogyne hapla* found in nurseries on *Scabiosa* and *pyrethrum*.

Brzeski, M. 1960. "Drei neue freilebende Nematoden aus Polen." Bulletin de L'Academie Polonaise des Sciences CL. II. VIII(6):261-264.

\_\_\_\_\_. 1961. "Two new species of free-living nematodes from Poland." Bulletin de L'Academie Polonaise des Sciences CL.II. IX(2):91-95.

\_\_\_\_\_. 1961. "Nicienie (Nematoda) torfowcow Puszezy Kampinoskiej." (Die Nematoden (Nematoda) der Torfmooren der Kampinos-Heide.) Fragmenta Faunistica. VIII(34):539-553.

\_\_\_\_\_. 1961. "Revision of the genus *Heterocephalobus* Brzeski, 1960, n.grad. (Nematoda: Cephalobidae)." Bulletin de L'Academie Polonaise des Sciences CL.II. IX(2):97-100.

Buhrer, E. M., Burk, M. K., Cobb, G. S. and Spruyt, F. J. 1960. "Nematology Literature List, 1959." (Issued in stencil form). 65pp.

Buhrer, E. M., Cobb, G. S. and Burk, M. K. 1961. "Nematology Literature List, 1960." CR-28-61, U.S.D. Agriculture, Crops Research Division, Nematology Investigations. (CR-28-61):68pp.



Burgis, D. S. and A. J. Overman. 1958. "Soil treatment for the production of field-seeded vegetables on sandy soil." Florida Agricultural Experiment Stations Annual Report. Year 1957-1958 317-318. Chemical tests to determine efficacy of "in-the-row" application for control of soil-borne pathogens.

Burk, L. G. and Dropkin, V. H. 1961. "Response of *Nicotiana repanda*, *N. sylvestris*, and their amphidiploid hybrid to root-knot nematodes." Plant Disease Reprtr. 45(9):734-735.

Cairns, E. J. 1960. "Methods in Nematology: a Review." Nematology (Ed. by J. N. Sasser and W. R. Jenkins) Chapel Hill, North Carolina, 480pp. (Chap.5):33-84.

Cairns, E. J. and W. A. Johnson. 1960. "Rootknot nematodes, a year round problem on Alabama farms." Highlights Agr. Res. (Ala.Sta.) 7(4):15.  
Re: Popular article - seasonal fluctuations of root knot larvae - soil analyses.

Caldwell, B. E., Brim, C. A. and Ross, J. P. 1960. "Inheritance of resistance of soybeans to the cyst nematode, *Heterodera glycines*." Agronomy Journal. 52(11):635-636.

Call, F. and N.G.M. Hague. 1961. "Relationship between the concentration of ethylene dibromide and nematicidal effect in soil fumigation." VIth International Nematology Symposium Abstract of the Papers. (Eng. p.81-82).

Callot, J. 1959. "Action d'un Agamomerimis sur les caracteres sexuels d'un Ceratopogonide." (Effects of an Agamomermis on the sexual characteristics of a midge.) Ann. Parasitol. Humaine et Comp. 34(3):439-443. Parasitism of a male *Culicoides albicans* by Agamomermis resulted in intersexuality, particularly noticeable in the antennae.

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\_\_\_\_\_. 1960. "Some data on the resistance against potato root-eelworm (*Heterodera rostochiensis* W.) in *Solanum kurtzianum*." Dutch summary. *Euphytica*. 9(2):185-190. Some local races of the potato root eelworm *Heterodera rostochiensis* show a high degree of reproduction in the roots of CFC 1673-offspring which had been provisionally found to be resistant. Therefore search has been made for new starting material with protection against such races. The foregoing sub-races are being classified in race B; the populations which are not capable of reproduction in the roots of CFC 1673 are classified in race A. Varieties of the diploid species *Solanum kurtzianum* have been included in the investigations. This species belongs to the series *Tuberosa* and has its habitat in North Argentina. Its resistance is based on two dominant polymeric factors. The classification of seedlings of the crosses between *S. kurtzianum* and susceptible cultivated diploid species (*S. goniocalyx* and *S. sternotomum*) presents no difficulties because transitional types as concerns cyst coverage are lacking. Examinations of the behavior of a number (42) of B-provenances of the parasite have shown that 35% of them is able to attack the resistant *kurtzianum* - hybrids heavily. From this it can be concluded that the race B can be divided into two





subraces which provisionally are indicated as race B<sub>1</sub> and race B<sub>2</sub>. No difficulties are encountered in including *S. kurtzianum* in the breeding work. Seeds of the first backcross generation are at our disposal. A potato variety harboring the genes for resistance derived from CPC 1673 and *S. kurtzianum* would be resistant against approx. 90% of all the strains of the parasite in the Netherlands. This condition of a combination of the two genes is necessary because it is still unknown whether *S. kurtzianum* is resistant against all A-populations of the parasite.

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*geophila* (de Man, 1876) is not. *S. canadensis* is considered a "species inquirendum." *Bolbella cylindricauda* Allgen, 1959, is shown to a sp. of *Polygastrophora* and is treated as a synonym of *P. hexabulba* (Filipjev, 1918).

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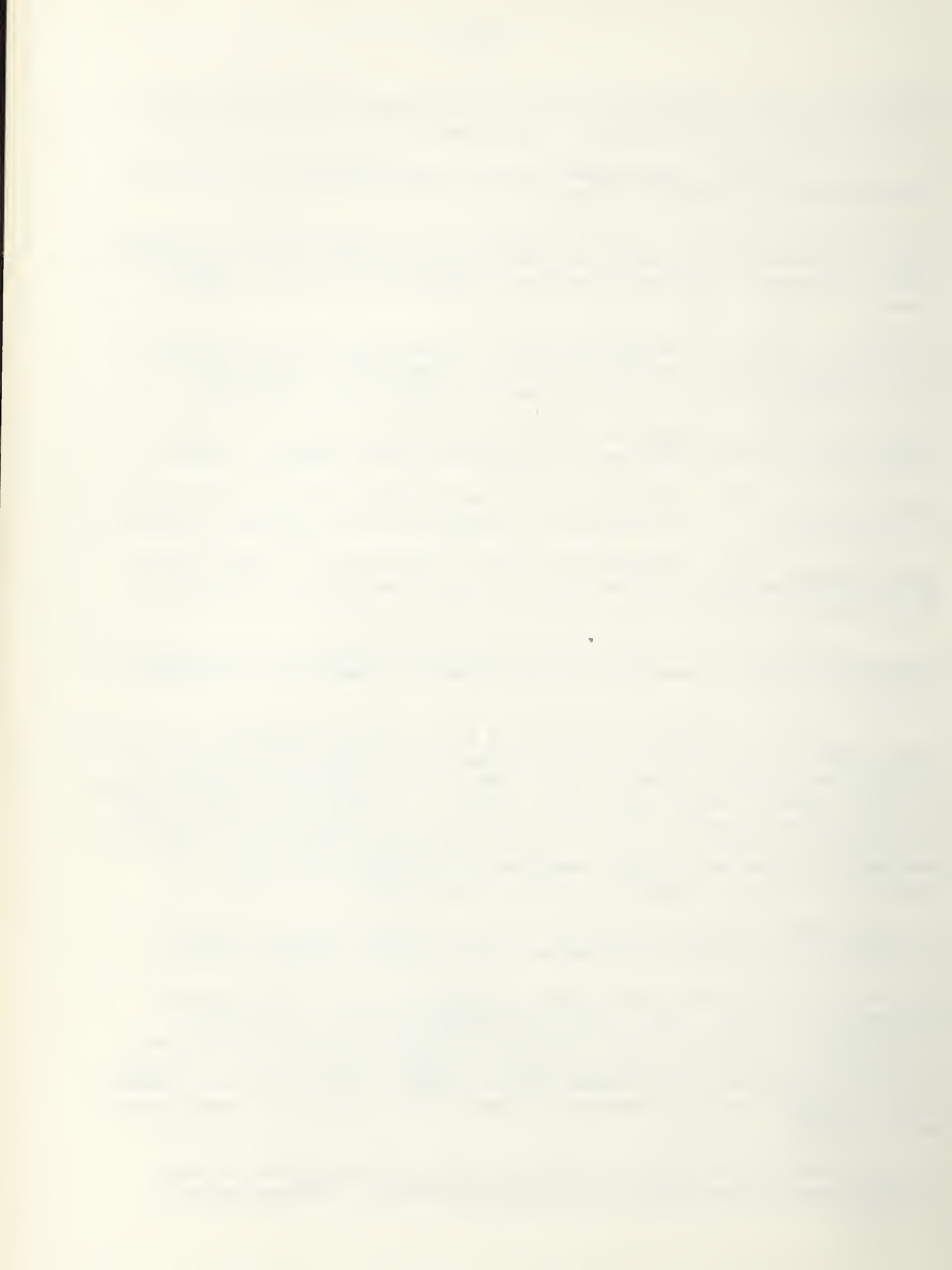
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soil and a sandy soil. The influence of 1 or 2 years' cultivation of a crop may be noticeable in the nematode infestation of subsequent crops for at least 2 seasons. This appears to hold for *Heterodera*, *Meloidogyne* as well as for migratory root-infesting species. Nine special host-parasite relationships are summarized.

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Westcott, Cynthia. 1960. "Plant disease handbook, 2nd ed." XII+825 p. Illus. D. Van Nostrand Company: Princeton, New Jersey. This newly revised 2nd edition of Plant Disease Handbook is a compendium of diseases which attack flowers and vegetables, trees, shrubs, vines and grasses in continental United States. More than 2000 diseases are described. This book is a reference manual for the amateur gardener and the expert and has been so organized for quick, accurate identification of the many diseases of plants. Much has been added for new research in this edition, and information on chemicals and treatment has been brought up to date. The topics include: Garden chemicals and their application; Classification of plant pathogens; Plant diseases and their pathogens; and Host plants and their diseases. The illustrations will aid the reader as well as the extensive subject index, glossary, selected bibliography, and a list of agricultural experimental stations.



Westgate, P. J., and R. B. Forbes. 1958. "Soil management problems in vegetable crop fields." Florida Agricultural Experiment Stations Annual Report. p.188. Response of chlorotic strawberry plants to chelated iron.

Whitehead, A. G. and L. Kariuki. 1960. "Root-knot nematode surveys of cultivated areas in East Africa." East African Agric. and Forest. Jour. 26(2):87-91. Map. A root-knot nematode survey in Kikuyu Division, Kiambu District, Kenya, revealed 4 root-knot nematode species. Of these *Meloidogyne javanica* and *M. incognita acrita* were found throughout the area. Crops and weeds in the area were subject to fairly heavy root-knot nematode infestations. Root multispecies are common in the area, especially with *M. javanica* and *M. incognita acrita*.

Wieser, W. 1959. "Reports of the Lund University Chile Expedition 1948-1949. 34. Free-living marine nematodes. IV. General Part." Lunds Universitets Arsskrift N.F. avd. 2. 55(5):111pp.

Wilcox, G. E., Newsom, L. D., Russel, D. A. and Johns, D. M. 1957. "Relationship of fertilizer treatment and soil fumigation in cotton production." Proc. Assoc. of Southern Agricultural Workers. 54th Annual Convention. p.73. Wilcox et al. describe experiments to determine the influence of nematode control on the incidence of *Fusarium* wilt and on crop response. Soil fumigation significantly reduced the number of root-knot larvae in the soil and the percentage of plants affected with wilt as well as increasing yields of cotton. Where there was a significant fertilizer-fumigant interaction, a response to fumigation was only obtained for the high rate on non-nitrogenous fertilizer treatments.

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Wilski, Andrzej, and Jerzy Radziwinowicz. 1960. "Wpływ dyfuzatów korzeniowych niektórych roślin na wychodzenie larw z cyst matwika ziemniaczanego *Heterodera rostochiensis* Wollenweber." (The effect of root diffusates of some plants on the hatching from potato root eelworm (*H. rostochiensis*) cysts). Russian and English summary. (In Polish) Biul. Inst. Ochrony Roslin. 10:177-183. Laboratory experiments were carried out





on the influence of 32 plant species on the hatching of potato root eelworm. The most pronounced stimulative effect was shown by root diffusates of buckwheat (24.3% of all larvae contained in cysts), maize (22.2%), fodder beet (19.0%), summer wheat (17.1%), onion (16.7%) and hemp (16.6%). Other diffusates were less active: pumpkin (12.7%), rye (11.2%) and rye grass (10.5%). *Lepidium sativum* and linseed did not stimulate hatching at all. There is a discussion of the practical aspects of growing on infected fields those plants whose root diffusates stimulate hatching from cysts.

Wilski, Andrzej. 1960. "Przyczynek do występowania matwika zbozowego *Heterodera avenae* Wollenweber 1924 (=H. major) na terenie województwa bydgoskiego." (On the occurrence of the cereal root eelworm *Heterodera avenae* Wollenweber, 1924 (= H. major) in soils of Bydgoszcz district.) Russian and English summary. Biul. Inst. Ochrony Roslin. 10:185-191. During investigations on spp. of *Heterodera* occurring in Poland many soil samples taken from fields in the district of Bydgoszcz were investigated for the presence of cysts of *H. avenae* (=H. major). Cysts of *H. avenae* were found in ca 34% of soil samples and in ca 6.8% of soil samples the infestation was estimated as high. Results indicate that *H. avenae* is spread widely in soils of the district of Bydgoszcz.

Wilski, A. 1960. "Ważniejsze nicienie, szkodniki roślin uprawnych." (The more important nematode pests of cultivated plants.) Warszawa, Państwowe Wydawn. Rolnicze i Lesne, 1960. 154 p.

Wilson, J. D., and Hedden, O. K. 1960. "Root-knot (*Meloidogyne hapla*) can be controlled in plantings of ornamentals." *Florists' Rev.* 126(3275): 23-24.

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\_\_\_\_\_. 1961. "Nematode populations in muck soil treated each year with the same fumigant." *Down to Earth.* 17(1): 6-10. Dowfume W-85, Vapam, Nemagon, Picfume and D-D are trademarked formulations of the following compounds, respectively: ethylene dibromide, sodium methyldithiocarbamate, 1-2-dibromo-3-chloropropane, chloropicrin, and dichloropropenes and dichloropropanes. These were applied 3 successive years to muck soil at rates of 5-50 gal./A. Populations of nematodes belonging to the genera *Meloidogyne*, *Pratylenchus* and *Paratylenchus* were drastically reduced by the Dowfume W-85 and Nemagon treatments, not substantially by the others. Yields of potatoes and onions were reduced by the Dowfume W-85 and Nemagon treatments, those of carrots and celery were not. Nemagon had a highly toxic effect on onions. Differences between treatments in yield of celery were small. The results leave some doubt as to the practical value of the various treatments.



Wilson, J. D. 1961. "The role of crop rotation in vegetable disease control." Proc. Ohio Veg. and Potato Growers' Assoc. 40:90-96.

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Winchester, James A. and Norman C. Hayslip. 1960. "Plant pangolagrass for root-knot control." Sunshine State Agricultural Research Report (Agr. Exp. Stations, Univ. of Fla., Gainesville) 5(4):8-9.

Winslow, R. D. 1960. "Some aspects of the ecology of free-living and plant-parasitic nematodes." Nematology (Ed. by J. N. Sasser and W. R. Jenkins). Chapel Hill, N. C., 480 pp. (Chap. 36):341-415.

Wöhlermann, S. 1960. "Kartoffelfeind Nr. 1: Der Nematode." Landesverband. Gartbau u. Landwirt., Mittbl. II(1):32-34. Re: popular type article *Heterodera rostochiensis*.

Wood, J. 1961. "Hot water treatment of tulip bulbs." Roy. Hort. Soc. Daffodil and Tulip Year Book. (26):128-131. (London). For nematode control. Re: A race of stem and bulb eelworm.

Wu, Liang-Yu. 1960. "*Criconema celetum*, n. sp. (Nematoda: Criconematidae) from African violets in Canada." Canadian Journal of Zoology. 38:913-916. *Criconema celetum*, n. sp., is described from African violets collected at St. Laurent, Quebec. The body has 40-43 annules, each having a row of spines except at the caudal end; those near the middle of the body each having a row of about 70 spines. The head consists of two annules with spines, the first 22-28  $\mu$  in diameter and the second 19-23.5  $\mu$ . The annules at the caudal end have spatulate projections each with several spines. The spear is 84.3-95  $\mu$  (with one exception, 100  $\mu$ ) long. The body is coated with soil particles under and around the spines.

Wu, Liang-Yu. 1960. "Comparative study of *Ditylenchus destructor* Thorne, 1945 (Nematoda: Tylenchidae), from Potato, Bulbous Iris, and Dahlia, with a discussion of De Man's ratios." Canadian Journal of Zoology. 38:1175-1187. Nematodes having the general characters of *Ditylenchus destructor* Thorne, 1945, from the potato, bulbous iris, and dahlia, did not reveal any significant difference in the basic structures to suggest the presence of more than one species. However, due to host influence, there may be some variation in total length, width, number and arrangement of sex cells, length of oesophagus, length of spear, and tail shape. Nematodes from potato were successfully transferred to dahlia and carrot, and from iris and dahlia to potato. Specimens of *D. destructor* from potato interbreed freely with





specimens from bulbous iris and from dahlia. Evidently these nematodes from the three hosts are the same species, i.e., *D. destructor*. Among the ratios used, the values of *c* in the case of males and that of "*V*%" have some support from the data.

Wu, L. Y. 1961. "*Paratylenchus tenuicaudatus* n. sp. (Nematoda: Criconeematidae)." Canadian Jour. Zool. 39(2):163-165. *Paratylenchus tenuicaudatus* n. sp. was collected in Ontario, Canada, from soil about roots of clover (*Trifolium repens* and *T. pratense*), of alfalfa (*Medicago sativa*), of maple tree (*Acer saccharum*), and from grass sod, during 1958 to 1960. This species has characters close to *Paratylenchus hamatus*, *P. elachistus*, and *P. nanus*, but differs from this species in having a long slender tail, in having the vulva in a more forward position, in having a more massive basal bulb of the esophagus, and in the fact that it is a considerably larger species.

Yokoo, Tamio, Kooki Matsunobu, and Yooko Ota. 1960. "On the variations of dimensions within soil nematodes. II. Dimensions of the suspected plant-parasitic nematode, *Aphelenchus avenae*, and the bud or leaf nematode, *Aphelenchoides fragariae*." Agri. Bull. Saga Univ. 10:125-136. In the systematic description of soil nematodes, 'dimensions' are given for each species described, but the deviation from the mean value of dimensions is usually fairly large. In the first report the results obtained in the investigations on the deviation of dimensions referring to the root lesion nematodes (*Pratylenchus* spp.) occurring in the potato tuber were described. This secondary report includes the results of investigation on the deviation of dimensions with regard to the suspected plant-parasitic nematode (*Aphelenchus avenae*) and the obligate parasite, the bud or leaf nematode, *Aphelenchoides fragariae*. It is concluded that the percentage of the standard deviation to the mean value is smallest in the *V*(5)-value amounting to only 2 or 3%, and that in *T* (%) -value is also comparatively small. Generally speaking the percentage of standard deviation to the mean value amounts to 10-15% in both species. These data seem to agree with that obtained by Taylor and Jenkins with regard to the root lesion nematodes occurring in Maryland, and also with that obtained by Yokoo and Matsumoto referring to root lesion nematodes occurring in Japan.

Yokoo, Tamio. 1960. "Some notes on the numbers of constrictions occurring on the tail region of larvae of the southern cotton root-knot nematode, *Meloidogyne incognita* var. *acrita*." (In Japanese with English chap. summary.) Agric. Bull. Saga Univ. 10:121-123.

\_\_\_\_\_, and Hiroshi Gyotoku. 1960. "On the damping off of the seedlings of the sugar beet caused by the root-knot nematode, *Meloidogyne incognita acrita*." Agric. Bull. Saga Univ. 11:65-72. Steam-sterilized sandy loam in unglazed pots was inoculated with adult females in the pre-egg-laying stage in the following numbers per pot: 25, 50, 100, 150 and 200.



Sugar beet seeds were then sown in these pots. The seedlings were observed for a period of 40 days after germination; numbers and development stages of the parasite in the plant tissues were checked by Goodey's solution method. Damping off increased sharply with an increase in the inoculation number above 50; in pots with 200 all the seedlings had died by the end of 40 days. The time required for a generation of the nematode in the beet seedling at about 25°C soil temperature appeared to be 30-40 days.

Young, T. W. 1958. "Tolerance of avocado rootstocks to attack by burrowing nematodes." Florida Agricultural Experiment Stations Annual Report. 357-358.

Yuksel, Hasan S. 1960. "Observations on the life cycle of *Ditylenchus dipsaci* on onion seedlings." *Nematologica*. 5(4):289-296.

Zadina, J. 1959. "Stand der Resistenzzüchtung bei Kartoffeln gegen den Nematoden (*Heterodera rostochiensis*) in der Tschechoslowakischen Republik." Deut. Akad. Landwirt-wissenschaft. zu Berlin, Tagungsberichte Nr. (20):83-85.

Zaval'skii, A. 1960. "Soil drying exterminates the gall nematode." (In Russian). *Kartofel' i Ovoshchi*. (9):41-43. Greenhouse culture.

Zimmermann, A. W. P. 1903. "Ueber einige auf den Plantagen von Ost- und West-Usambara gemachte Beobachtungen." *Ber. Land- u. Forstwirtschaft. Deutsch-Ostafrika*. 1:351-381.

Zobell, H. 1960. "Nematode is spreading." *Sugar Beet* (Quart. Jr. Amalgamated Sugar Co.) 13(27):6-8.

Zuckerman, Bert M. and John W. Coughlin. 1960. "Nematodes associated with some crop plants in Massachusetts." *Agricultural Experiment Station University of Massachusetts Bulletin* 521. 18 pp. Presents results of a survey of stylet-bearing nematodes found in cranberry bogs in Massachusetts. The nematodes associated with 11 other plant hosts are also listed. Many of these nematodes have been proven pathogenic to crops in other parts of the United States. It is reasonable to expect that stylet-bearing nematodes reduce crop yields and plant growth in this state as they do elsewhere. This information forms a basis for studies of the economic significance of nematode damage in this area and, if needed, the development of suitable methods for control.

Zuckerman, Bert M. 1960. "Parasitism of cranberry roots by *Tetylenchus joctus* Thorne." *Nematologica*. 5(4):253-254 + plate.

\_\_\_\_\_. 1961. "Parasitism and pathogenesis of the cultivated cranberry by some nematodes." *Nematologica*. 6(2):135-143.

\_\_\_\_\_. 1961. "An estimate of the amount of plant fluid ingested by a nematode." *Vith International Nematology Symposium Abstracts of the Papers*. Eng. p.65.





Zur Strassen, Otto. 1959. "New contributions to the developmental mechanics of the nematodes." *Zoologica*. 38(3):1-142. The early development of the nematodes is pure self-differentiation, and a perfect mosaic. During the course of cleavage, a multitude of different substances enter the various blastomers in whose cytoplasm they determine the morphological behavior of the cell. These determinants operate in a typical order in time and space. The temporal order depends on their rhythmical production synchronized with cytoplasmic changes in the cells. The spatial order is related to the hereditary, 3-dimensionally and heteropolar, micellar or molecular basic structure. Asymmetry is due to a ("katheteropolar") polarity of the latitudinal axis. Two antagonistically effective "guiding substances" allow the formation of bilaterality despite this katheteropolarity. It is still uncertain whether the determinants produced by the nucleus are released into the cytoplasm prior to mitosis or during the arrangement of the chromosomes at metaphase. External damages may induce inverse-asymmetrical development. For this an explanation is given which differs from those suggested by Bonfig and Boveri. Contrary to Bonfig, there are also geno-inversions, previously described by the author, in which the left-turn partner is genetically privileged, may, however, be inverted toward regular asymmetry by external injury.

